

SUPPLEMENTARY DATA 1—Facies and stratigraphic occurrences of Central Appalachian basin brachiopod genera.

| Genus | #Species | Group | Facies occurrences | | | | | | | | | | Stratigraphic occurrences | | | | | | | | | | Size (cm ²) | |
|------------------|----------|-------|--------------------|--------------|-------------------|------------------------|---------------|---------------------------|----------------------------|-------------------------|-------------|--------|---------------------------|----------|-----------|--------|---------|----------|-------|----------|-----------|--------|-------------------------|-----------|
| | | | Red-bed (1) | Gray Sh. (2) | "Green shale" (3) | Skeletal limestone (4) | Sandstone (5) | "Dark-gray limestone" (6) | Argillaceous limestone (7) | Shaly lime mudstone (8) | "Shale" (9) | Oolite | Price | Maccrady | Hillsdale | Denmar | Taggard | Pickaway | Union | Alderson | Bluefield | Hinton | | Bluestone |
| Anthracospirifer | 2 | 3 | 2 | . | . | . | . | . | . | 3 | . | . | . | . | . | . | . | 2 | 2 | 2 | 3 | 3.6 | | |
| Athyris | 4 | - | 1 | . | . | . | . | 1 | . | . | 1 | . | . | . | . | . | . | . | . | . | . | 2.8 | | |
| Avonia | 1 | 2 | . | 1 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 2 | . | 2.0 | | |
| Brachythyris | 4 | 2 | 1 | . | . | . | . | 1 | . | . | . | . | . | . | . | . | 1 | . | . | . | . | 19.7 | | |
| Buxtonia | 1 | 3 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 2 | 1 | 6.8 | | |
| Camarotoechia | 6 | - | . | . | . | . | 4 | . | . | 1 | 3 | 2 | 11 | 1 | 5 | . | . | . | . | . | 2 | 4.6 | | |
| Centronella | 1 | 1 | . | . | . | . | . | . | . | . | . | . | 1 | . | . | . | . | . | . | . | . | 3.8 | | |
| Chonetes | 5 | - | 2 | . | . | 1 | 8 | 2 | 2 | 1 | 1 | . | 1 | 2 | 1 | 2 | 1 | 5 | 2 | . | 1 | - | | |
| Chonetina | 1 | 2 | . | . | . | 1 | . | . | . | . | . | . | 1 | . | . | . | . | . | . | . | . | 0.3 | | |
| Cleiothyridina | 5 | 3 | 3 | 1 | 1 | 3 | 1 | 5 | 4 | 7 | . | 1 | 1 | 2 | 9 | 9 | 1 | 2 | 13 | 7 | 12 | 2.0 | | |
| Coledium | 1 | 1 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 1 | 2 | 21.5 | | |
| Composita | 7 | 3 | 3 | 1 | 2 | 2 | 1 | 18 | 5 | 15 | . | 1 | . | . | 1 | 8 | 3 | 1 | 21 | 37 | 15 | 4 | 2.5 | |
| Crania | 2 | - | . | . | 1 | . | . | 1 | . | . | . | . | . | . | 1 | . | . | 2 | 1 | . | . | - | | |
| Crurithyris | 1 | 3 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 1 | 0.2 | |
| Cryptonella | 1 | 2 | . | . | . | . | . | . | . | . | . | . | 2 | . | . | . | . | . | . | . | . | 0.9 | | |
| Delthyris | 1 | - | . | . | . | . | 1 | . | . | . | . | . | 1 | . | . | . | . | . | . | . | . | - | | |
| Derbyia | 1 | - | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 50.6 | | |
| Diaphragmus | 2 | 1 | 3 | 1 | 2 | 1 | 1 | 12 | 4 | 9 | 1 | . | . | . | 6 | 2 | 2 | 1 | 13 | 25 | 13 | 2 | 6.9 | |
| Dictyoclostus | 5 | 2 | . | . | . | 1 | 1 | . | . | . | . | . | 3 | . | 6 | 4 | . | . | . | 1 | . | 46.1 | | |
| Dielasma | 4 | 2 | 1 | . | . | . | 1 | . | . | 1 | . | . | 1 | . | 2 | 2 | . | 1 | 2 | 1 | . | - | | |
| Echinoconchus | 2 | 2 | . | . | . | . | . | 2 | . | . | . | . | . | . | 4 | 1 | . | . | 2 | . | 1 | 30.9 | | |
| Eumetria | 5 | 1 | 1 | 1 | 2 | 2 | 1 | 2 | . | 3 | . | 1 | 1 | . | 1 | . | 3 | 4 | 7 | 11 | 4 | 3.4 | | |
| Flexaria | 1 | 1 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 2 | . | 8.2 | |
| Fluctuaria | 1 | 2 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 1 | . | 4.0 | |
| Girtyella | 4 | 1 | . | . | 1 | 2 | . | 1 | 1 | 1 | . | 1 | . | . | 3 | 6 | 1 | . | 1 | 3 | 4 | 2 | 1 | - |
| Heteralosia | 1 | 2 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 2 | . | 2.7 | |
| Hustedia | 1 | 2 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 1 | 1 | 0.5 | |

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|-----------------|----|---|---|---|---|---|---|----|---|----|---|---|---|---|----|----|---|---|---|----|----|----|------|------|
| Inflatia | 1 | 2 | . | . | . | . | . | . | . | . | . | . | . | 1 | . | . | . | . | 1 | . | 2 | . | 11.1 | |
| Labriproductus | 1 | 1 | . | . | . | . | . | . | . | . | . | . | 1 | . | . | . | . | . | . | . | . | . | 3.9 | |
| Leiorhynchoidea | 1 | - | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 1 | 5.5 | |
| Lingula | 1 | - | . | 1 | . | . | . | . | . | . | . | . | 1 | . | . | . | . | . | . | . | . | 2 | - | |
| Lingulodiscina | 2 | 2 | . | 1 | 1 | . | . | . | . | . | . | . | 1 | . | . | . | . | . | . | . | 1 | . | 2.8 | |
| Linoproductus | 2 | 3 | . | . | . | 1 | . | . | . | . | . | . | . | 3 | 1 | . | . | . | . | . | . | . | 11.5 | |
| Marginovatia | 1 | - | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 1 | 1 | 1.6 | |
| Martinia | 2 | 2 | . | . | . | . | . | . | 1 | 1 | . | . | . | . | . | . | . | 1 | 2 | 2 | . | . | 54.5 | |
| Moorefieldella | 1 | - | . | . | . | . | . | . | . | . | . | . | . | . | 1 | . | . | . | . | . | . | . | 3.2 | |
| Nucleospira | 1 | 2 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 1 | . | 1.1 | |
| Oehlertella | 1 | 2 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 1 | 1 | 6.0 | |
| Orbiculoidea | 1 | 3 | . | 2 | . | . | . | . | . | . | . | . | 2 | . | 1 | . | . | . | . | . | 2 | 3 | 0.8 | |
| Orthotetes | 3 | 2 | 1 | 1 | 3 | 1 | 6 | 14 | 3 | 1 | 2 | 1 | 7 | 1 | 16 | 3 | 1 | . | . | 15 | 23 | 14 | 2 | 22.1 |
| Ovatia | 2 | 2 | . | . | . | . | . | . | 1 | . | . | . | . | . | . | . | . | . | 1 | 3 | 2 | 2 | 11.3 | |
| Petrocrania | 1 | 2 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 1 | 1 | 1 | . | 0.7 | |
| Phricodothyris | 1 | 2 | . | . | . | . | . | . | 2 | . | . | . | . | . | . | . | . | . | 1 | . | . | . | 5.8 | |
| Productella | 1 | - | . | . | . | . | 1 | . | . | . | . | . | 1 | . | . | . | . | . | . | . | . | . | - | |
| Productina | - | - | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | - | |
| Productus | 17 | 2 | 2 | 2 | 4 | 1 | 1 | 15 | 4 | 13 | 8 | . | 1 | 2 | 24 | 12 | 2 | 3 | 3 | 23 | 21 | 1 | 7.9 | |
| Pseudosyrinx | 1 | 2 | . | . | . | . | 1 | . | . | . | . | . | 2 | . | . | . | . | . | . | . | . | . | - | |
| Pugnoides | 2 | 2 | . | . | . | . | 1 | . | . | 1 | . | . | . | . | 1 | . | 1 | . | . | . | 1 | . | 1.5 | |
| Punctospirifer | 4 | 3 | 1 | . | . | . | 2 | . | 1 | . | . | . | 3 | 1 | 1 | . | . | . | . | 1 | 2 | . | - | |
| Pustula | 5 | 1 | . | . | 2 | . | 1 | 1 | . | 2 | . | . | . | . | 2 | 5 | . | . | 1 | 1 | 3 | 1 | 25.8 | |
| Reticularia | 4 | 1 | 1 | 1 | 1 | . | 1 | 1 | . | 2 | . | . | 3 | 1 | 1 | 1 | . | 1 | 1 | 1 | 5 | 2 | 7.7 | |
| Reticulariina | 1 | 2 | . | . | . | 1 | 1 | . | . | . | . | . | . | . | 1 | . | . | . | . | 1 | 2 | 2 | 1.6 | |
| Rhipidomella | 3 | 2 | 2 | . | . | . | 3 | . | . | . | . | . | 3 | 2 | . | . | . | . | . | . | . | . | 5.3 | |
| Rhynchopora | 1 | 2 | . | . | . | . | 1 | . | . | . | . | . | 1 | . | . | . | . | . | . | . | . | . | 1.0 | |
| Rugosochonetes | 1 | 2 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 1 | 2 | . | 1.1 | |
| Schellwienella | 1 | 1 | . | . | . | . | . | . | . | . | . | . | 1 | . | . | . | . | . | . | . | . | . | 15.8 | |
| Schizophoria | 4 | 3 | . | . | . | . | . | . | . | . | . | . | . | . | 1 | . | 1 | . | . | . | . | 1 | 11.7 | |
| Schuchertella | 1 | 2 | . | . | . | . | 2 | . | 1 | . | . | . | 4 | . | . | . | . | . | . | . | . | . | 3.3 | |
| Skelidorygma | 1 | 1 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 1 | 1 | . | - | |
| Spirifer | 14 | 2 | 1 | . | 4 | 1 | 6 | 14 | 5 | 1 | 3 | 1 | 1 | 1 | 21 | 7 | 2 | 1 | 2 | 18 | 31 | 4 | 1 | 14.5 |
| Spiriferella | 1 | 2 | 2 | . | . | . | . | . | . | . | . | . | 1 | 1 | . | . | . | . | . | . | . | . | 6.0 | |
| Spiriferina | 7 | - | 2 | 1 | 5 | 4 | 2 | 7 | 3 | 1 | 2 | . | 5 | 2 | 8 | 6 | 1 | . | 4 | 1 | 21 | 1 | 1 | - |
| Stenoscisma | 1 | 2 | . | 1 | . | . | . | 1 | . | 4 | . | . | . | . | . | . | . | . | 1 | 1 | 6 | 3 | . | 6.9 |
| Streptorhynchus | 3 | 2 | . | . | . | . | . | . | . | 1 | . | . | . | . | 1 | . | . | . | . | . | 1 | . | 2.3 | |
| Syringothyris | 1 | 1 | . | 1 | . | . | 3 | . | . | . | . | . | 4 | . | 2 | . | . | . | . | . | . | . | 26.1 | |
| Tetracamera | 2 | 1 | . | 1 | . | . | 1 | . | . | . | . | . | 2 | . | 2 | . | . | . | . | . | . | . | 1.4 | |
| Torynifer | 1 | 1 | . | . | . | . | . | . | . | . | . | . | 1 | . | . | . | . | . | . | 1 | 2 | 2 | 11.8 | |